



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/722,439 | 11/28/2003 | Ikken So | 117896 | 7377 |
| 25944 | 7590 | 07/02/2007 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | MOTSINGER, SEAN T | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2624 | | |
| | | MAIL DATE | DELIVERY MODE | |
| | | 07/02/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/722,439 | SO ET AL. | |
| | Examiner | Art Unit | |
| | Sean Motsinger | 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 May 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 3, 13, 15, 17 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-2, 4-12, 14, 16, 18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 April 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/23/2004</u> | 6) <input type="checkbox"/> Other: _____ |

Response to Applicants Arguments

1. Applicant's election with traverse of species in the reply filed on May 14th 2007 is acknowledged. The traversal is on the ground(s) that there is no burden to examine the entire application. This is not found persuasive because of the following reasons: art applied to one species is not likely to be applicable to the other and different search queries would be required.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 3, 13, 15, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Objections to the Claims

3. Claims 8 and 9 objected to because of the following informalities: in claims 8 and 9 "the attention pixel unit" lacks antecedent basis. For the purposes of examination examiner will assume the claim to read "a attention pixel".... Appropriate correction is required.

Rejections Under 35 U.S.C. 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A Computer program per se is abstract and not statutory; to be statutory it must be stored on a computer readable medium. Examiner suggest the language, "A computer readable medium storing a computer program..." Note support for such an article of manufacture, however, must be found in the specification.

Rejections Under 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 5, 7, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Re claim 5, claim 5 recite "an image formation section for forming an image based on the image data decompressed by the re-decompression section." It is unclear whether this image formation section is different from the image formation apparatus in claim 1 respectively. For the purpose of examination examiner interprets that they are not different.
7. Re claim 7, claim 7 recites "wherein as the filtering, the filtering section changes the pixel value of the attention pixel unit so as to raise the probability

that the pixel value of the attention pixel unit will match the pixel value of the pixel unit at the preset position." It appears to the examiner that from page 11 of the specification that the attention pixel unit is the pixel unit which is being processed. Therefore it is unclear which "pixel unit" is being referenced by "the pixel unit" or if it is the same as "the attention pixel unit." There for it is also unclear how changing "the attention pixel unit" will raise the probability of matching "the pixel unit." For the purposes of examination examiner is interpreting claim 7 to read "wherein as the filtering, the filtering section changes the pixel value of the attention pixel."

8. Re claim 12 "the edit section" lacks antecedent basis in the claim. Since there is no edit section in the claim it is unclear to which data the re-filtering is done and how the re-filtering is done in the claim. Therefore Examiner is unable to determine how the re-filtering section relates to the claim. For the purpose of applying prior art examiner is interpreting claim 12 to not include the filtering section.

Rejections Under 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1-2, 4-8 10-11 12, 16, and 18 are rejected under 35 U.S.C. 102(b)

as being anticipated by Zandi et al US 6,195,465.

10. Re claim 1 Zandi discloses An image processing system comprising: an

image data transmission terminal (column 47 line 2 note data is transmitted

so there must be a transmission device); an image formation apparatus

(monitor or printer see column 39 lines 25-35); a filtering section for

performing filtering for image data (wavelet filter column 2 lines 44); a coding

section for performing reversible coding processing (entropy coder column 2

lines 46) for the image data subjected to the filtering by the filtering section;

and a decompression section (entropy decoder see column 52 claim 60) for

performing decompression processing for the image data subjected to the

coding processing by the coding section, wherein the filtering of the filtering

section changes the pixel value of image data (note wavelet filters change the

pixel values into coefficients column2 lines 40-50) so as to be fitted for the

coding processing of the coding section.

11. Re claim 2 Zandi discloses an image processing system comprising: an

image data transmission terminal; and an image formation apparatus,

wherein the image data transmission terminal includes: a filtering section for

performing filtering for image data(wavelet see claim 1); a coding section

(entropy encoding see claim 1) for performing reversible coding processing

for the image data subjected to the filtering by the filtering section; and a transmission section (see column 47 lines 1-2 note that to transmit coded over the internet there must be a transmitter at the encoder end) for transmitting the image data subjected to the coding processing by the coding section to the image formation apparatus, and wherein the image formation apparatus includes: a reception section (column 47 lines 1-2 note that to transmit coded over the internet there must be a receiver at the decoder end) for receiving the image data from the image data transmission terminal; and a decompression section (entropy decoder see column 52 claim 60) for performing decompression processing for the image data received by the reception section, and wherein the filtering of the filtering section changes the pixel value of image data (note wavelet filters change the pixel values into coefficients column2 lines 40-50) so as to be fitted for the coding processing of the coding section.

12. Re claim 4 Zandi discloses wherein the filtering section performs filtering corresponding to an algorithm of the coding processing of the coding section (see abstract note the purpose of the wavelet transform is to prepare for compression via entropy decoding).

13. Re claim 5 Zandi discloses an edit section for performing edit processing (see column 48 lines 29-35) for the image data decompressed by the decompression section; a re-coding section (see column 48 lines 29-35) for

performing coding processing for the image data subjected to the edit processing; a re-decompression section (see column 48 lines 29-35 note it can be compressed and decompressed for multiple cycles to perform editing) for performing decompression processing for the image data subjected to the coding processing by the re-coding section; and an image formation section (monitor or printer see column 39 lines 25-35) for forming an image based on the image data decompressed by the re-decompression section.

14. Re claim 6 Zandi discloses wherein to perform coding processing for an attention pixel unit in the image data, the coding section references the pixel value of a pixel unit at a preset position and performs coding processing (note the pixels have a specific ordering column 2 lines 40-50).
15. Re claims 7 Zandi discloses wherein as the filtering, the filtering section changes the pixel value of an attention pixel unit (see column 2 lines 40-50 note the filtering will change the values to coefficients).
16. Re claim 8 Zandi discloses the filtering section changes the pixel value of the attention pixel unit in response to the spatial frequency of the image data (see column 2 lines 40-50 note wavelets change the values based on frequency).
17. Re claim 10 Zandi discloses a parameter generation section for generating a

filter parameter (quantization levels note examiner is interpreting the filtering section to cover both wavelets and quantization) in response to a specified compression ratio (fixed rate column 47 line 35), wherein the filtering section performs the filtering in response to the generated filter parameter.

18. Re claim 11 Zandi discloses wherein the parameter generation section generates the filter parameter (quantization levels column 47 line 65-68) in response to the speed at which data can be transferred (transmission channel column 48 lines 1-2) to the image formation apparatus or the operation state of the image formation apparatus (display resources column 48 lines 1-2).
19. Re claim 12 Due to the 112 second paragraph rejection above this claim has no further limitations. (see rejection for claim 2)
20. Re claim 16 Zandi discloses An image processing method for repeating coding processing and decompression processing of image data, the method comprising: performing filtering of changing the pixel value so as to fit for reversible coding processing for image data (column 2 lines 40-50); performing reversible coding processing for the image data subjected to the filtering (column 2 lines 40-50); and performing decompression processing for the image data subjected to the coding processing (column 2 line 41).

21. Re claim 18, claim 18 is a program for performing the method of claim 16.

Zandi discloses performing his method on a computer (see column 4 line 55).

22. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Bright et al US 2002/0081035.

23. Re claim 14 Bright discloses An image formation apparatus comprising: a reception section (note the data is not created so it must be received see figure 10 the image is received) for something for receiving image data subjected to filtering and reversible coding processing; a decompression section (lossless entropy decode figure 15a element 720 paragraph 104) for performing decompression processing for the image data received by the reception section; an edit section (manipulations figure 15a elements 762 paragraph 104) for performing edit processing for the decompressed image data; a re-coding section (lossless entropy encode figure 15a element 788) for performing reversible coding processing for the image data subjected to the edit processing; a re-decompression section (see figure 10 and abstract note that multiple compression and decompression cycles occur) for performing decompression processing for the image data subjected to the coding processing by the re-coding section; and an image formation section (see figure 15a element 758 and see paragraph 104 note the image can be output at each cycle) for forming an image based on the image data decompressed by the re-decompression section.

Rejections Under 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claim 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa et al US 5,282,256 in view of common knowledge in the art.
25. Re claim 1 Ohsawa discloses an image processing system comprising: an image data transmission terminal (see figure 1 element 17); a filtering section for performing filtering for image data (replacing means column 2 lines 35-50); a coding (coding means column 2 lines 35-50) section for performing reversible coding processing for the image data subjected to the filtering by the filtering section; wherein the filtering of the filtering section changes the pixel value of image data so as to be fitted (control the predicted hit rate column 2 lines 55-60) for the coding processing of the coding section.
26. Ohsawa does not disclose a decompression section for performing decompression processing for the image data subjected to the coding processing by the coding section, or an image formation apparatus. However examiner is taking official notice that it is notoriously well known to decompress

an image with a decoder and displaying it on a display for the obvious advantage of displaying the image. Therefore one of ordinary skill in the art would have found it obvious to combine Ohsawa with common knowledge in the art to reach the aforementioned advantage.

27. Re claim 9 Ohsawa further discloses wherein as the filtering, the filtering section changes (replacing see abstract) the pixel value of an attention pixel unit in the image data so as to decrease the code amount of coding (perform compression efficiently see abstract) of the coding section and distributes (disperses see abstract) the change amount (error see abstract) produced by changing the pixel value to peripheral pixels (see abstract), and wherein the coding section codes the pixel value changed by the filtering (see abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Motsinger whose telephone number is 571-270-1237. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM
Motsinger
6/22/2007



JINGGE WU
SUPERVISORY PATENT EXAMINER